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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)		
	10/566,086	BURGERMEISTER	BURGERMEISTER ET AL.	
Office Action Summary	Examiner	Art Unit		
	HAMID R. BADR	1781		
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet w	ith the correspondence add	ess	
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D.  - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNI 136(a). In no event, however, may a will apply and will expire SIX (6) MOI e, cause the application to become A	CATION. reply be timely filed  NTHS from the mailing date of this com BANDONED (35 U.S.C. § 133).		
Status				
Responsive to communication(s) filed on <u>05 3</u> 2a) ☐ This action is <b>FINAL</b> . 2b) ☐ This  3) ☐ Since this application is in condition for allowed closed in accordance with the practice under	s action is non-final. ance except for formal mat	·	nerits is	
Disposition of Claims				
4) ☑ Claim(s) 13-18 and 20-29 is/are pending in the 4a) Of the above claim(s) is/are withdrases 5) ☐ Claim(s) is/are allowed.  6) ☑ Claim(s) 13-18 and 20-29 is/are rejected.  7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) are subject to restriction and/or	awn from consideration.			
Application Papers				
9) The specification is objected to by the Examina  10) The drawing(s) filed on is/are: a) accomposed as a specific at any objection to the Replacement drawing sheet(s) including the correct and the specific as a specific and the specific accomposed as a specific as a specific accomposed accomposed as a specific accomposed accomposed as a specific accomposed as a specific accomposed as a specific accomposed accomposed as a specific accomposed accomp	cepted or b) objected to drawing(s) be held in abeya ction is required if the drawing	nce. See 37 CFR 1.85(a). I(s) is objected to. See 37 CFR	, .	
Priority under 35 U.S.C. § 119				
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority documen 2. Certified copies of the priority documen 3. Copies of the certified copies of the priority application from the International Burea * See the attached detailed Office action for a list	nts have been received. Its have been received in A prity documents have beer au (PCT Rule 17.2(a)).	Application No  received in this National S	tage	
Attachment(s)				
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	Paper No	Summary (PTO-413) s)/Mail Date Informal Patent Application 		

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### **DETAILED ACTION**

Applicants' amendment filed 7/5/2011 is acknowledged.

Claims 13-18, and 20-29 are being considered on the merits.

### Claim Rejections - 35 USC § 112

- 1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
  - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 2. Claims 13-18 and 20-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 3. Claim 13 is indefinite for "a composition that is one of a blend and a suspension". It is not clear what is meant by this phrase. The water content implies that the composition may have a wide spectrum of consistencies. Therefore, this phrase appears to be redundant.
- 4. Claim 13 is indefinite for "whereby the blending is an act of initiating fermentation". Since the fermentation starts the moment yeast gets activated (in case of dried yeast) at a proper temperature, it is not clear how a chilled environment in the range 0C-2C can initiate the fermentation.

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5. Claim 13 is indefinite for "gradually cooling the composition in the chilled environment to a temperature of about 0C to 4C within 72 hours". This phrase makes the sequence of the process confusing in reference to the previous step in the process.

- 6. Claim 13 is indefinite for "storing the pre-dough concentrate in a chilled environment at a temperature in a range of 0C and 6C". The stage before storing the dough, recites a temperature of 0C-4C. At this temperature range, the fermentation rate is reduced because baker's yeast is a mesophilic organism. It is therefore, not clear why the dough is stored at the same temperature range to reduce the fermentation rate.
- 7. It is suggested to claim the invention in a form to avoid confusion, specifically by avoiding the overlapping temperatures as presently claimed. This way the process stages are clearly separated and the invention is presented in a realistic manner.
- 8. Claim 15 is indefinite for "wherein the temperature of the composition during a part of the fermentation is 4 to 8C". Again the statement is not clear. The significance of this claim limitation is not understood.
- 9. Claim 16 is also indefinite for "fermentation is severely inhibited by cooling the composition to 0C to 4C". The significance of this claim is not clear, because by exposing the mass of the dough to suboptimal temperatures, the fermentation is halted or completely inhibited.

# Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

<sup>(</sup>a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

- 11. Claim13-18 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domingues et al. (WO 93/01724; hereinafter R1) in view of Schou et al. (EP 0 152 943; hereinafter R2)
- 12. R1 discloses a refrigerated yeast leavened dough composition and method of making the same.
- 13. R1 discloses that the ceased activity of the yeast at refrigeration temperatures will extend the storage of the dough at refrigeration temperatures as presently claimed.
- 14. R1 discloses that the yeast is rehydrated at a temperature of less than 10C and mixed with flour, water etc. The dough may be proofed at elevated temperatures. After it has been cooled, the dough may be stored at refrigeration temperature for 90 days or more without any substantial likelihood of rupturing a container due to an increase in carbon dioxide pressure. (page 3, summary of invention).
- 15. It is also noted that the instant specification discloses that when mixing the ingredients, the wet components (e.g. water, or the compressed yeast) is chilled to about 3C. Therefore, it is clear that the steps disclosed by R1, i.e. introduction of chilled water, mixing the ingredients, cooling the dough and storing at refrigeration temperature overlap the steps as presently claimed.
- 16. R1 discloses another embodiment in which yeast-containing dough composition which can be refrigerated for extended periods of time. Such a composition includes dried yeast, chilled water, and flour. (page 4, first paragraph). It is therefore, clear that

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the blend of flour, yeast is introduced to chilled temperatures when mixed with chilled water where in the fermentation is simultaneously initiated.

- 17. R1 discloses that the water is preferably added 0C. The additional components of the dough can also be mixed with the yeast water slurry. Ingredients necessary to achieve a desired texture or taste in the final cooked dough product may be added at this stage. (page 7, paragraph 2)
- 18. R1 teaches of storing the dough immediately at refrigeration temperature at 4C to 7.2 C which holds the yeast in an inactive state. (page 7, last paragraph). Alternatively the dough composition may be held at an elevated temperature for a predetermined period of time to permit the yeast to leaven the dough shortly after the dough composition has been mixed. Once the dough has been leavened, it may then be stored at refrigeration temperatures to hold the yeast in its inactive state. (page 8, first paragraph).
- 19. Given that the dough ingredients are mixed; it is clear that the fermentation of the dough starts and the temperature of the dough starts to increase due to yeast activity and given that R1 discloses that the dough should be cooled and stored at refrigeration temperature of 4C-7.2C. It is also clear that depending on the volume of the dough, the cooling of the whole mass of the dough will take some time. The larger the volume of the dough, the longer the cooling time will be. However, as disclosed by R1, the mass of the dough should be cooled to 4C to 7.2C which overlaps with the 0-6C as presently claimed.

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- 20. It is noted that claim 20, requires the production of a pre-dough concentrate (interpreted by the Examiner as a sponge dough) which is then mixed with flour and water to make a final dough for baking. Since the sponge method is known in the art, the dough composition as disclosed by R1 can be obviously made as a sponge dough (a pre-dough) and can be mixed with flour and water to make a final dough for baking later.
- 21. While R1 discloses a process of making refrigerated dough for improved shelf life, any composition comprising flour, water and yeast may be processed and refrigerated according to the process of R1. Such compositions may be comprise thermally modified cereal products as disclosed by R2.
- 22. R2 discloses a method of making bread where the cereal flour or mixture of flours is precooked by extrusion. The extrusion is carried out at temperature range of 150-180C. A composition is made from about 40% of rye meal and about 60% of wheat bran. (Abstract).
- 23. R2 teaches of a method in which a mixture of wheat flour (30%) and wheat bran (70%) is extruded at 150C. After the extrusion process, the mixture is pulverized in a mill. Rye meal is then mixed with more wheat flour, water, dough conditioner (acidifying agent), baker's yeast, and approximately 3% of the mixture and baked into a bread. The mixture contains 10 parts by weight of the extruded, pulverized product. (Example 2, pages 5-6). Given that the process temperature, as disclosed by R2, is above the gelatinization temperature of starch, it is obvious that gluten in the thermally modified product will be denatured as presently claimed. It is also noted that the incorporation of

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the cooked flour product increases the water absorption rate of the flour into which the cooked product is incorporated. Therefore, depending on the desired level of water absorption, amount of the cooked pulverized product (i.e. thermally modified product) can be calculated and optimized as presently claimed. Increased water absorption will give a better yield of the baked product. Furthermore, thermally modified product may develop toasted flavors affecting the flavor of the baked product.

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- 24. The designation of "pre-dough concentrate" to a composition comprising flour, water and yeast does not differentiate it from other compositions containing flour, yeast and water. The cited references disclose that compositions comprising flour, yeast, and water may be produced and refrigerated for improve shelf life.
- 25. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make a composition containing thermally processed cereal flour, water and yeast; and refrigerate it in order to lower the fermentation rate at low temperature of refrigeration as disclosed by R1. The refrigerated dough is protected against mesophilic organisms and having a reduced fermentation rate, it will have a longer shelf life. Absent any evidence and based on the combined teachings of the cited references, there would be a reasonable expectation of success in making a refrigerated composition.

## Response to Arguments

Applicants arguments have been reviewed thoroughly. These arguments are not deemed persuasive for the following reasons.

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1. Applicants argue that the references fail to provide any teaching, suggestion, motivation or other apparent reasons to make a pre-dough concentrate, and that there is no indication that such a concentrate, produced according to the claimed method, exists in the art.

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- a. The designation of this terminology; i.e. 'pre-dough concentrate' is an arbitrary choice. The name of a composition does not determine the patentability. Any composition comprising yeast, thermally modified cereal flour, and yeast which is stored under refrigeration, as disclosed by R1 and R2, meets the requirements of the claims.
- b. A pre-dough composition may also be interpreted as a 'sponge dough', whose production and storage is well known in the art.
- 2. Applicants argue that R1 teaches of substantially halting the carbon dioxide production at refrigeration temperatures.
- a. The Examiner believes that this teaching is equivalent to the limitation of claim13, reciting that the fermentation continues at a reduced rate.
- 3. Applicants argue that there is no substantial fermentation that takes place prior to refrigeration, apparently due to an attempt in R1 to retard fermentation by manipulating the yeast starter solution, such as e.g. employing cold water.
- a. R1 disclosed various embodiments of the invention. Please see paragraph18 above. R1 clearly discloses that if desired the dough may be fermented for a

predetermined amount of time. The dough is then cooled and refrigerated to lower the fermentation rate.

- b. R1 uses cold water to make the mixture. The presently claimed invention also used chilled wet ingredients at about 3C. Therefore, applicants are taking advantage of the same principles.
- 4. Applicants argue that R1 teaches away from the presently claimed invention, because as presently claimed when the composition is chilled at a temperature of 0-2C, fermentation continues, though at a reduced rate.
- a. The overall teachings of R1 is to bring about conditions for a reduced rate of fermentation. That is the reason the dough can be stored for a longer time. Therefore, R1 is not teaching away from the claimed invention wherein the same principle of lowering the storage temperature would improve the shelf life of the dough.
- 5. Applicants argue that in the present invention, cooling temperatures diminish fermentation from what it would be at warmer temperatures, while in R1 yeast selection and yeast treatment have an absolute effect on halting fermentation.
- a. Applicants are calling the process of R1 a treatment because the yeast is mixed with cold water and then other dry ingredients such as flour are added to the yeast slurry. On the other hand, the instant application calls for using chilled wet ingredients; e.g. water and compressed yeast for making the initial composition. The principles applied are the same.

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b. Furthermore, the rejection is obviousness type rejection. R1 teachings make the refrigeration process of the claimed invention obvious. Should R1 discloses every step as presently claimed, it would be an anticipatory reference as in a 102(b) rejection.

- 6. Applicants argue that R2 is not consistent with the claimed subject matter that concerns pre-dough concentrates stored for a period of time before use.
- a. The storing of a composition comprising flour, yeast and water at refrigeration for a period of time before use is taught by R1. R2 does not have to disclose the same concept. R2 discloses a composition comprising yeast, thermally modified flour and yeast as presently claimed.
- 7. Applicants argue that nothing in R2 informs the skilled artisan why a thermally modified ground product should be used in making a pre-dough concentrate.
- a. R2 clearly discloses the incorporation of thermally processed cereal flour in dough. The thermally processed cereal dough definitely contributes to certain dough properties including increased water absorption, flavor, and texture of the baked good.
- b. obviousness under 103 is not negated because the motivation to arrive at the claimed invention as disclosed by the prior art does not agree with appellant's motivation", *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1990), *In re Tomlinson*, 150 USPQ 623 (CCPA 1966).

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### Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1781

HAMID R BADR Examiner Art Unit 1781